

# PATENT ABSTRACTS OF JAPAN

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(71)Applicant : NISSAN MOTOR CO LTD

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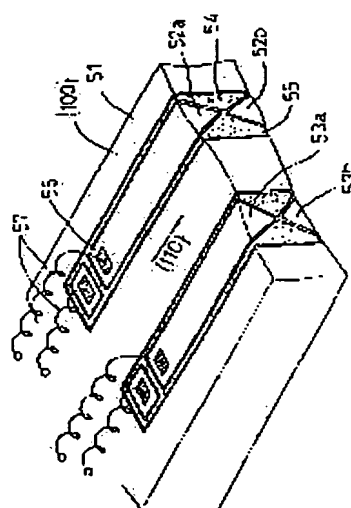
(72)Inventor : KANEKO HIROYUKI  
SHINOHARA TOSHIAKI

## (54) SEMICONDUCTOR STRAIN DETECTING APPARATUS

### (57)Abstract:

**PURPOSE:** To make an apparatus compact by arranging pressure sensitive resistors so as to face both upper and lower surfaces of a strain sensitive part.

**CONSTITUTION:** An Si substrate is formed so that the surface forms a face 100. Two pairs of rod shaped resistors 52a and 52b and 53a and 53b are formed along an axis 110 so as to face the upper surface and the lower surface of a pressure resisting part comprising a part of the Si substrate. The resistance changes in the resistors 52a and 52b and 53a and 53b caused by the deflection of a strain sensitive part 51 are taken out as electric signals. Stresses are generated in the direction opposite to one another in the resistors 53a and 53b and 52a and 52b which are formed on the upper surface and the lower surface in a semiconductor strain detecting apparatus formed in this way. Therefore, a bridge circuit can be realized readily. By this constitution, the occupying area of the strain sensitive part 51 can be decreased, and the apparatus can be made compact.



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